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The Rocky Mountain Watersheds Volunteer Monitoring Network

~Kristy Hoffman, Rocky Mountain Watersheds Volunteer Monitoring Network Program Coordinator

"Light is the task where many share the toil."

-Homer

Volunteer water monitoring programs are enjoying increasing enrollments in most states. This may reflect citizens' desires to become actively involved in their communities, achieve a thorough understanding of how their watershed works, and contribute to what some see as "the greater good" of society. Behind the scenes, volunteer monitoring program leaders provide needed services for volunteers. But who provides guidance for the program leaders? EPA and others have created an assortment of manuals for initially setting up a program. But where can program leaders turn to for growth and development in an effort to improve services for volunteers?



At the 2000 Annual Meeting, curiosity gets the better of these RMWVM Network members who can't resist a search for macroinvertebrates in the nearby stream. ~Photo by Anne Lewis

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In EPA Region 8, one organization is helping volunteer monitoring program leaders build on successful models and strengthen skills necessary for growing programs. The Rocky Mountain Watersheds Volunteer Monitoring (RMWVM) Network works collectively to assist one another with technical and programmatic needs and expertise.

The RMWVM Network is a regional partnership of nonprofit organizations as well as university and state programs from the Rocky Mountain States. Their homes are the headwaters of the Missouri, Mississippi, Colorado, Columbia, Arkansas, Great Salt Lake, Hudson Bay, and Rio Grande watersheds.

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Greenway on the Red

~ Larry Spears, *The Consensus Council & Stacey Eriksen, EPA Region 8*

As a result of broad public input and support throughout the Red River Basin, Greenway on the Red Trust is being launched as a new nonprofit dedicated to promoting and coordinating the development over 15 years of a continuous greenway system along over 600 river miles of the Red River and its tributaries from Lake Traverse in South Dakota to Lake Winnipeg in Manitoba. Led by a prestigious regional board of directors and guided by an experienced program management committee, Greenway on the Red will make a strategic contribution to future flood mitigation, economic development and diversification, community well-being and cross-border partnerships throughout the Red River watershed. Seed funding has been awarded to the Trust from EPA Region 8 Regional Geographic Initiative funding.

Over a century of intensive agricultural development brought wealth and opportunity to those that farmed and settled the richly fertile soils of the Red River Valley. Today, catastrophic and repetitive flood losses and an economy rapidly diversifying beyond agriculture underscore the need for greater landscape function and amenities. This need is especially great in the Red River Valley, a region subject, in some areas, to over 90 percent agricultural and urban use.

Past landscape conversion to agricultural and urban uses in the Red River Basin has created a region lacking in environmental and outdoor recreational amenities. A continuous greenway corridor from Lake Traverse to Lake Winnipeg will transform the region by providing new recreational and economic opportunities such as multipurpose trail systems (biking, walking, cross-country skiing, etc.), hunting and fishing, birdwatching, canoeing, and ecotourism—including establishment of the only north-south connection between the North Country Trail in the U.S. and the Canada Trail. A greenway will also bring dramatic environmental quality and conservation benefits by restoring and connecting native riparian and prairie habitat on a regional scale. The potential over time to establish the Red River as the only north-south international link between the national North Country and Canada trails and to connect scenic and recreational destinations such as the Sheyenne Valley, Devils Lake Basin, Pembina Gorge and Turtle Mountains into a single trail and recreational system will generate future tourism income for rural areas and greatly enhance the quality of life for urban residents.

The proposal to establish Greenway on the Red has emerged from work of the International Flood Mitigation

Initiative (IFMI). Funded by the U.S. Federal Emergency Management Agency and the Province of Manitoba, IFMI convenes top public, private and nongovernmental leaders from Manitoba, Minnesota, North Dakota, and the Canadian and U.S. federal governments to develop comprehensive policy recommendations, model projects and public-private partnerships for flood mitigation. IFMI is establishing Greenway on the Red Trust as one of a dozen major initiatives.

Last summer, IFMI organized six community meetings throughout the Red River Basin involving over 320 citizens (Fargo, ND-Moorhead, MN, Breckenridge, MN-Wahpeton, ND, Valley City, ND, Thief River Falls, MN, Emerson-Pembina, and Morris, Manitoba). At these meetings, citizens consistently identified the creation of greenways as a way to transform the immediate floodplain of the Red and its tributaries from a community threat into an asset for flood mitigation, recreation, conservation and economic development.

Greenway on the Red Trust will weave the many existing individual riparian and greenway projects and their local proponents—all along the mainstem of the Red and its tributaries—into a coherent regional whole. It will provide a collaborative mechanism for coordination, planning, funding and implementation across political jurisdictions and across public, private and nonprofit sectors. By building partnerships and marketing a watershed-wide project of national and international significance, the ability to secure and leverage resources for a joint endeavor will greatly exceed the present capacity of any one individual project to attract political and financial support.

Expected products for the first year include:

- Launching of Greenway on the Red Trust on behalf of greenway development partners throughout the Basin;
- Establishment of a consortium of government agencies and private and nonprofit organizations to allocate responsibilities and coordinate greenway development and implementation; and
- Development of a comprehensive, long-term public and private funding strategy; and
- Completion of a land ownership inventory and preparatory work for elevation and topographical mapping.

The Greenway is projected to measure over 600 miles and will have an average width of 1000 feet on either side of the main stem and major tributaries. In addition to flood mitigation benefits, the Greenway will incorporate conservation and recreation amenities and

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Colorado Extensive Urban Nonpoint Source Pollution Campaign

~Randy Ristau, Nonpoint Source Agricultural Outreach Specialist, Colorado Department of Public Health and Environment

"Crystal clear" and "sparkling blue" are common media references to Colorado water. Citizens throughout the state have been hearing another water message, though, through a special outreach crusade. The message shares how an average homeowner can actively protect and avoid polluting Colorado waters.

The League of Women Voters Colorado Education Fund is reaching the state with this message through the Colorado Water Protection Project, supported in part by a Clean Water Act 319 grant. The Project seeks to raise citizen awareness of the need for more preventative approaches for emerging water issues. Since the majority of Colorado's population is urban, three information areas were identified for emphasis: home fertilizer and pesticide use; pet waste; and do-it-yourself auto maintenance.

The media campaign was spurred by a 30-second television message. Approximately 90 percent of potential Colorado viewers were reached with the television products. The campaign broadened with the release of the following information and education activities:

- Newspaper articles and editorials;
- Eye-catching advertisements on local busses displayed the influence of fertilizers, pet waste and motor oil on water quality;
- A series of articles addressing the citizen's role in preventing nonpoint source pollution for distribution to employees of local businesses;
- An information pamphlet entitled, "How you can prevent pollution in Colorado's Lakes, Rivers and Streams" was produced in Spanish and English for state-wide distribution; and,
- An advertising campaign placed public service advertisements in newspapers throughout the state.
- Governor Bill Owens declaration of "Polluted Runoff Prevention Week"; and,
- Development of a web site.

Project partners are a diverse representation of private and government entities. Nearly 40 representatives serve on the Project's technical committee. Sixteen organizations have contributed funds and services to the Project.

Products of these efforts include:

- 16,000 bookmarks were developed with Colorado State University;
- A pollution prevention exhibit at the Colorado State Fair;



Commuter bus with the League of Women Voters Colorado Water Protection Project message on its side. ~Photo by Lamar Transit Advertising

- "Colorado Water Protection Kits" along with other information products were distributed at Ocean Journey and the Colorado aquarium;
- A polluted runoff presentation was delivered as a part of a lecture series at the Denver REI sporting goods store;
- 2001 Calendars will be distributed by the REI store; and,
- Metro Wastewater, Denver will partner to deliver a special outreach program regarding water issues with the pesticide, Diazinon.

In addition to offering Project successes on the web site for others to use, a publication entitled, "Lessons Learned" is available. The publication is a compendium of the Project experiences in its early phases.

The pre-survey found fewer than 50 percent of respondents knew that stormwater runs into local rivers, streams and lakes untreated by municipal treatment facilities. A majority did not realize household-generated polluted runoff was a significant contributor. Over 25 percent did not think household-generated polluted runoff was a local community concern, nor had an impact on their quality of life. Twenty percent did not think an individual could make a difference by preventing pollution in their household.

Lack of information and inconvenience were noted as barriers for changing behavior. Television and newspapers were the best information means to convey needed information.

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Missouri River Currents-Focus on the Big Sioux Watershed

~Deb Lebow & Doug Lofstedt, EPA Region 8

The Big Sioux Watershed in South Dakota covers a large portion of the eastern border of South Dakota, and spills into both Minnesota and Iowa. It is a major tributary to the Missouri River. Roughly a third of the population of South Dakota lives in this drainage area. It has been designated a high priority watershed by the State of South Dakota, and is an area of focus for EPA Region 8's Missouri River Team. The watershed is experiencing growth and associated problems with the urban area of Sioux Falls. The State's Big Sioux River Water Quality Assessment indicates that problems with fecal coliform continue to plague the region. Flooding has been a problem in the Upper Big Sioux basin, and human activities primarily related to agricultural practices have negatively impacted the quality of the river system and lakes and reduced its potential for beneficial use. Other cities within the basin in addition to Sioux Falls include Brookings and Watertown. Cities, towns, and rural water systems in eastern South Dakota either directly or indirectly rely on the Big Sioux River and ground water for their water supply needs. EPA has been working with various groups in the region, looking at the watershed as a whole, and, in conjunction with the South Dakota Department of Environment and Natural Resources, providing funding under the Clean Water Act section 319 nonpoint source control program to restore the watershed.

The City of Sioux Falls has applied for a Project EMPACT grant from EPA. The objective of this grant is to raise public awareness about the importance of protecting the Big Sioux River drainage basin. EPA has awarded the City of Sioux Falls a Regional Geographic Initiative (RGI) grant to produce a video which will explain some of the projects the city has undertaken to improve the quality of the river, provide greater access for the public to the river, and integrate livability and water quality issues in the City. EPA has also invested significant resources into a Brownfields project adjacent to the existing Falls Park project. The project would enhance the beauty of the park and eliminate some potential contamination within the urban park area.

The City of Watertown, SD, in the upper portion of the basin, has been working on flood control issues, as well as restoration of several of the lakes in the area. The City received a Project IMPACT grant from the Federal Emergency Management Agency (FEMA) this past year to develop some disaster mitigation projects.

The State of South Dakota has provided nonpoint source section 319 grant monies to a variety of entities to assess

and restore the Big Sioux River and waterbodies within the basin. In fact, the bulk of the monies used for environmental restoration in the basin have been 319 funds, as well as money from the Natural Resource Conservation Service's Environmental Quality Incentives Program. Projects funded with these nonpoint source funds include restoration of numerous lakes and watersheds and funding of an animal waste nutrient management team. Section 319 funds are also funding a technical assistance team for stream buffer zones in eastern South Dakota. These are locally-led efforts to improve water quality in lakes and watersheds, by implementing treatment activities such as animal waste management systems, grazing management systems, riparian improvements, and cropland erosion control.

Assessments funded by section 319 are being used for development of total maximum daily loads (TMDLs). TMDLs are done when a waterbody is not meeting water quality standards. EPA has also awarded RGI funds to the East Dakota Water Development District to enhance early public participation in the TMDL process.

All of these activities in the Big Sioux watershed, when taken together, should amount to greater public participation in environmental issues, restoration of areas damaged by human activities and additional forethought into planning for an environmentally sound basin for the future.

For further information, please contact **Deb Lebow** at 1-800-227-9441 X 6223 or lebow.deborah@epa.gov or **Doug Lofstedt** at X 6835 or lofstedt.doug@epa.gov

Colorado Sediment TMDLs

~Deb Lebow, EPA Region 8

On August 11, 2000, EPA approved the first three Total Maximum Daily Loads (TMDLs) for nonpoint source pollutants in Colorado. A TMDL, which is done when a water body is not meeting water quality standards, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. In other words, it is the sum of the allowable loads of a single pollutant from all contributing sources (point and nonpoint) or a pollution budget. A TMDL contains the reductions needed to meet water quality standards and allocates those reductions among the sources in the watershed. The three approved were Straight Creek for sediment, Box Canyon Creek for sediment, and the San Miguel River for sediment.

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“One-Stop Shopping” for Grants to Protect Region 8 Ecosystems

~Ayn Schmit, EPA Region 8



Have you applied for EPA Region 8's Ecosystems Protection Program funding in the past, and wondered whether you should submit a proposal in the fall for wetlands funding? Or wait for spring and apply for the Regional Geographic Initiative? Or maybe the Water Quality funds? Or write separate proposals and compete for all three? We have heard from many applicants that it was frustrating and time consuming to have to write multiple proposals to compete for different funding opportunities when they were not sure which funding program was the best fit for their proposal.

This year, Region 8's Ecosystems Protection Program is trying something different— a “one-stop shopping” process for our funding sources. Applicants can apply with a single proposal for five different ecosystems funding programs, including Regional Geographic Initiative, wetlands and water quality funding, Total Maximum Daily Load (TMDL) funding and Red River Basin Watershed Information Network funds. Requests for Proposals are being sent out approximately November 6, 2000, and proposals must be submitted by January 12, 2001. We hope this process will make it easier for applicants, and allow us to consider proposals for the “best fit” funding sources. If you do not receive a Request for Proposals and are interested in this funding, you can find information on the one-stop shopping process at:

<http://www.epa.gov/region08/ecoprotection/ecogrant/newgrant.html>

For further information please contact **Pam Dougherty** at 1-800-227-9441 X 6012 or **dougherty.pam@epa.gov**

Land Conservation Workshop Summary

~Marc Alston, EPA Region 8

EPA is active in many programs with land conservation impacts, (watersheds, community-based environmental protection, reinvention, wetlands, nonpoint source pollution) with regulatory, financial, enforcement, partnership and other linkages. Several regional programs see benefit in improving partnerships with land conservation programs.

As a result of a workshop hosted by the EPA Region 8's Ecosystem Stewardship Team (EST) on September 14, the Region will be working with land trusts in Colorado to

improve partnerships between land conservation and environmental programs. We will also be looking for ways to work on forging similar relationships in other Region 8 states. The September 14 workshop brought together leaders from the Colorado Wildlife Federation, Colorado Coalition of Land Trusts, Eagle Valley Land Trust, Colorado Cattlemans Agricultural Trust, Colorado Open Lands, The Nature Conservancy, Trust for Public Lands, Douglas County Open Space, National Park Service Rivers, Trails and Conservation Assistance Program, Colorado Division of Wildlife, National Resource Conservation Service, US Fish and Wildlife Service/ Partners for Wildlife, and Great Outdoors Colorado.

The workshop objective was to open communication channels and identify additional opportunities for partnership. Approximately 30 staff from across the Region attended, as did the Colorado Department of Public Health and Environment (CDPHE) and Colorado Department of Natural Resources, and other organizations. Specific follow-up actions include provision of further information on a) EPA and State community based, watershed, sustainable development and smart growth approaches as they relate to land trusts; b) EPA and State funding sources; and c) further detail on the mechanics of land conservation tools such as conservation easements. The EPA Ecosystem Stewardship Team will work directly with the Colorado Coalition of Land Trusts and CDPHE to develop and exchange this information.

For further information, please contact **Marc Alston** at 1-800-227-9441 X6356 or **alston.marc@epa.gov**

(Colorado TMDLs Continued from Page 4)

For the San Miguel River, the TMDL addresses sediment yield associated with nonpoint sources in the mainstem of the San Miguel River from Marshall Creek to the South Fork of the San Miguel. It also addresses runoff from Tomboy Road, melt water originating from stored snow at the Town of Telluride's maintenance facility, and runoff through the Alder Street culvert. The target is a 30 percent reduction of sediment from early spring runoff. It is reasonable to expect a significant decrease in sediment load with the controls that will be placed on sources. Grant monies from EPA and efforts of the Town of Telluride have placed controls on all these sources.

For further information on San Miguel, please contact **Deb Lebow** at 1-800-227-9441 X 6223 or **lebow.deborah@epa.gov**

Fish Consumption Advisories

~Toney Ott, EPA Region 8



EPA Region 8, States and Tribes have wide-ranging water quality programs related to healthy fisheries. Increasing interest in protecting the health of consumers has led to a number of reports on fish tissue consumption issues and the sources of problematic chemicals.

Fish is a healthy choice for food because it is a high-protein, low-fat food with vitamins and minerals. Oils in some fish can lower cholesterol and help other ailments. States and tribes issue fish consumption advisories to encourage healthy eating of fish. Some types and sizes of fish from polluted waters may contain toxic chemicals that can build up in your body. Advisories often contain specific information for women and children. The U.S. Food and Drug Administration (FDA) regulates the safety of fish sold in stores. The FDA advises pregnant women, and women of childbearing age who may become pregnant, to eat shark and swordfish no more than once a month, because of mercury contamination. FDA's information on seafood safety is at <http://www.foodsafety.gov/~fsg/seafood.html>

Fish and wildlife consumption advisories are issued for the general population, recreational fishers, subsistence fishers and sensitive subpopulations such as pregnant women, nursing mothers, and children. Advisories are issued to limit or avoid consumption of certain fish species from specific waterbodies or types of waterbodies. An interactive database is now available for fish consumption advisories at <http://www.epa.gov/OST/fish> Also available at the fish tissue advisory web site are chemical fact sheets, references to EPA guidance documents and additional communication documents.

In 1987, EPA conducted an investigation to determine the prevalence of selected bioaccumulative pollutants in fish and to correlate elevated fish tissue contaminant levels with pollutant sources. A list of 60 chemicals was developed for the study, including dioxin and furans, Polychlorinated Biphenyls (PCBs), pesticides and herbicides, mercury, and others. Results of the 1987 study indicated that chemicals were present in fish tissue at many sampling sites, and some contaminants occurred at levels posing potential human health risks. A new broader scope four-year national study of chemical residues in fish tissue began in 2000. The results of the second study will be compared to the original information. At that time EPA will be able to measure progress in protecting the fish.

For further information, please contact **Toney Ott** at 1-800-227-9441 X 6909 or ott.toney@epa.gov or the **Region 8 Water Quality Monitoring Team** at 1-800-227-9441 X 6084.

(Nonpoint Source Pollution Campaign Continued from Page 3)

Health concerns, drinking water protection and environmental quality for future generations were the main motivation factors for changing behavior. Post-survey results showed respondents have been impacted by Project efforts. Two Project goals were accomplished: greater awareness of what household-generated polluted runoff is, and that individuals can make a difference. Less success was realized towards the goal of greater understanding of how polluted runoff enters local rivers, lakes and streams. For further information contact **Cynthia Petersen**, Project Manager, Colorado Water Protection Project at (303) 861-5195.

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circumscribed areas for existing human settlements. Appropriate, larger distances will exist on either side of the main stem for agriculture, conservation and recreational uses consistent with flood mitigation. A mix of private easements, acquisitions, gifts, transfer of development rights and other arrangements will be used.

Smaller greenways are being planned and/or implemented in the Red River basin, but until now, there was no group dedicated to joining them into one continuous corridor. Some areas where greenways are currently under development include: Grand Forks, ND-East Grand Forks, MN; Walsh County, ND; Fargo, ND-Moorhead, MN; Wahpeton, ND-Breckenridge, MN; Cass County, ND; Pembina River Advisory Board; and Selkirk, Manitoba.

While the scope of a Greenway on the Red is large, implementation of a Lake Traverse to Lake Winnipeg corridor is envisioned over fifteen years. Greenway on the Red Trust will encourage and assist individual communities and jurisdictions to develop the greenway incrementally each year, eventually linking separate local legs into a continuous regional corridor. This will serve as a compelling goal and bind Red River Basin communities together in a common purpose that transcends political boundaries.

For further information, please contact **Genevieve Thompson**, National Audubon Society & Greenway on the Red, 701-298-3373 or GTHOMPSON@Audubon.org

(Rocky Mountain Watersheds Continued from Page 1)

At this time, the RMWVM Network includes the following programs:

- Colorado Division of Wildlife's Rivers of Colorado Water Watch Network
- Montana Watercourse and its Montana Volunteer Water Monitoring Project, a nonprofit program at Montana State University
- Teton Science School and the Wyoming Department of Environmental Quality's educational monitoring program
- New Mexico Department of Game and Fish's New Mexico Watershed Watch
- Water Watch Partnership and the Gore Range Science School, nonprofit organizations in Colorado
- Utah Cooperative Extension Service's Stream Keepers monitoring program
- South Dakota Lakes and Streams Association

Although the RMWVM Network is a collection of programs from the Rocky Mountain region, they have been fortunate to receive assistance from River Network, a national nonprofit organization. River Network supports the RMWVM Network by providing organizational and technical guidance.

The impetus for the RMWVM Network began in 1995 when program coordinators gathered at the Teton Science School to share information about their programs. Participants who attended realized the importance of learning from each other's successes and progress in order to avoid reinventing the wheel. Barb Horn, Program Director for Rivers of Colorado Water Watch Network, adds, "There's value in coming together as a region. Although networks may be politically correct, we're trying to do something genuine here, not whimsical or faddish. We're attempting to work outside of the traditional box in order to achieve what we all want; viable, healthy watersheds that transcend county, state, and political boundaries."

Leaders from state programs continued to gather once a year to begin to put this vision into a tangible package.

"We should all be concerned about the future because we will have to spend the rest of our lives there."

~Charles F. Kettering



Members of the RMWVM Network gathered in May 2000 for an annual meeting in Big Sky Country - Montana.

~Photo by Anne Lewis

As a result, the RMWVM Network has received funding from both EPA Headquarters and EPA Region 8. Funds have been used to support the group's annual meeting and to hire a part-time coordinator. The annual meeting has typically provided opportunities for planning network activities and technical and organizational clinics for individual and state programs. Past clinic topics have included data interpretation, study design, narrative and numerical water quality standards, the Clean Water Act, Total Maximum Daily Loads (TMDLs), National Pollutant Discharge Elimination System (NPDES) permits, program evaluation, and creation and care of boards and steering committees.

Over the course of the next several years, the RMWVM Network will be putting together trainings and educational materials for program leaders that help teach their monitoring groups how to interpret the data they collect. Through this process, participants will inevitably see the importance of generating good study designs and will be given opportunities to create or improve existing study designs as part of the workshops.

For further information about the Rocky Mountain Watersheds Volunteer Monitoring Network, you can contact **Kristy Hoffman**, RMWVM Network Program Coordinator, at (406) 251-2210, or khoffman@bigsky.net or **Tina Laidlaw**, EPA Region 8, 1-800-227-8917 X 6880, laidlaw.tina@epa.gov



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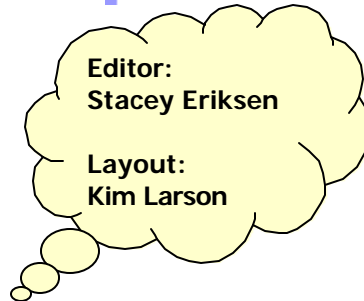
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